<u>**IN THE CLAIMS**</u>:

Please amend the claims according to the following listing, in which insertions are indicated by underlining, and deletions are indicated by strikethrough or double brackets. Please cancel claims 3, 8, and 13 without prejudice, and without dedication or abandonment of the subject matter thereof. Please add claims 22-24 shown below. This listing of claims replaces all prior versions, and listings, of claims in the application.

1. (Currently Amended)   A hearing aid <u>comprising:</u> ~~forming a Noise-Vocoded Speech Sound signal that is obtained by dividing at least one portion of an input sound signal into a frequency band signal and subjecting one of the frequency band signals to noise, and outputting the Noise-Vocoded Speech Sound   signal~~

<u>a first band filtering portion including a band filter which extracts a signal with a predetermined frequency band when a sound signal is input to the hearing aid;</u>

<u>an envelope extracting portion including an envelope extractor which extracts an envelope of the frequency band signal extracted by the band filter;</u>

<u>a noise source generating a noise for deteriorating the input sound signal;</u>

<u>a second band filtering portion including a band filter which extracts a noise signal corresponding to the predetermined frequency band from the noise generated by the noise source; and</u>

<u>a multiplying portion which subjects each said sound signal with a predetermined frequency band to said noise signal corresponding to the predetermined frequency band by multiplying an output from the envelope extracting portion by an output from the second band filtering portion, and configures a Noise-Vocoded Speech Sound signal therefrom;</u>

<u>wherein the Noise-Vocoded Speech Sound signal is outputted by the hearing aid</u>.

4

2. (Currently Amended)   A hearing aid <u>comprising:</u> ~~forming a Noise-Vocoded Speech~~ ~~Sound signal that is obtained by dividing at least one portion of an input sound signal into a~~ ~~plurality of frequency band signals and subjecting the frequency band signals to noise, and~~ ~~outputting the Noise-Vocoded Speech Sound signals~~

<u>a first band filtering portion including a plurality of band filters, each said filter extracting a frequency band signal with a predetermined band when a sound signal is input to the hearing aid;</u>

<u>an envelope extracting portion including a plurality of envelope extractors, each said extractor extracting an envelope of a corresponding frequency band signal;</u>

<u>a noise source generating a noise for deteriorating the input sound signal;</u>

<u>a second band filtering portion including a plurality of band filters, each said filter extracting a noise signal corresponding to a predetermined band from the noise outputted by the noise source;</u>

<u>a multiplying portion subjecting said frequency band signals with the predetermined frequency bands to said noise signals corresponding to the predetermined frequency bands by multiplying outputs from the envelope extracting portion by corresponding outputs from the second band filtering portion; and</u>

<u>an adding portion accumulating outputs from the multiplying portion, thereby configuring a Noise-Vocoded Speech Sound signal;</u>

<u>wherein the Noise-Vocoded Speech Sound signal is outputted by the hearing aid</u>.

3. (Canceled)

4. (Previously Presented)   The hearing aid according to claim 1 or 2, wherein at least one of a number of the band filters for division into frequency band signals and a frequency of a frequency band boundary can be changed at least through language.

5. (Previously Presented)   The hearing aid according to claim 1 or 2, wherein at least one of a number of the band filters for division into frequency band signals and a frequency of a frequency band boundary can be changed through automatic language recognition.

6. (Currently Amended)   A training device comprising: ~~outputting a Noise-Vocoded Speech Sound signal that is obtained by dividing at least one portion of a sound signal into a plurality of frequency band signals and subjecting one of the frequency band signals to noise, receiving a response from a trainee and outputting a result as to whether the response is correct or incorrect~~

a first band filtering portion including a band filter which extracts a signal with a predetermined frequency band when a sound signal is input to the training device;

an envelope extracting portion including an envelope extractor which extracts an envelope of the frequency band signal extracted by the band filter;

a noise source generating a noise for deteriorating the input sound signal;

a second band filtering portion including a band filter which extracts a noise signal corresponding to the predetermined frequency band from the noise generated by the noise source; and

a multiplying portion which subjects each said sound signal with a predetermined frequency band to said noise signal corresponding to the predetermined frequency band by

multiplying an output from the envelope extracting portion by an output from the second band filtering portion, and configures a Noise-Vocoded Speech Sound signal therefrom; wherein

the training device outputs the Noise-Vocoded Speech Sound signal, and when the training device receives a response from a trainee the training device determines whether the response is correct and outputs an indication as to whether the response is correct or incorrect is outputted.

7. (Currently Amended)   A training device comprising: ~~outputting a Noise-Vocoded Speech Sound signal that is obtained by dividing at least one portion of an sound signal into a frequency band signal and subjecting the frequency band signals to noise, receiving a response from a trainee and outputting a result as to whether the response is correct or incorrect~~

a first band filtering portion including a plurality of band filters, each said filter extracting a frequency band signal with a predetermined band when a sound signal is input to the training device;

an envelope extracting portion including a plurality of envelope extractors, each said extractor extracting an envelope of a corresponding frequency band signal;

a noise source generating a noise for deteriorating the input sound signal;

a second band filtering portion including a plurality of band filters, each said filter extracting a noise signal corresponding to a predetermined band from the noise outputted by the noise source;

a multiplying portion subjecting said frequency band signals with the predetermined frequency bands to said noise signals corresponding to the predetermined frequency bands by

7

multiplying outputs from the envelope extracting portion by corresponding outputs from the second band filtering portion; and

an adding portion accumulating outputs from the multiplying portion, thereby configuring a Noise-Vocoded Speech Sound signal;

wherein the training device outputs the Noise-Vocoded Speech Sound signal, and when the training device receives a response from a trainee the training device determines whether the response is correct and outputs an indication as to whether the response is correct or incorrect.

8. (Canceled)

9. (Previously Presented)   The training device according to claim 6 or 7, wherein at least one of a number of the band filters for division into frequency band signals and a frequency of a frequency band boundary can be changed at least through language.

10. (Previously Presented)   The training device according to claim 6 or 7, wherein at least one of a number of the band filters for division into frequency band signals and a frequency of a frequency band boundary can be changed through automatic language recognition.

11. (Currently Amended)   A game device outputting a Noise-Vocoded Speech Sound signal, that is obtained by dividing at least one portion of a sound signal into a frequency band signal and subjecting one of the frequency band signals to noise, receiving a response from a game player and outputting a result as to whether the response is correct or incorrect comprising:

a first band filtering portion including a band filter which extracts a signal with a predetermined frequency band when a sound signal is input to the game device;

an envelope extracting portion including an envelope extractor which extracts an envelope of the frequency band signal extracted by the band filter;

a noise source generating a noise for deteriorating the input sound signal;

a second band filtering portion including a band filter which extracts a noise signal corresponding to the predetermined frequency band from the noise generated by the noise source; and

a multiplying portion which subjects each said sound signal with a predetermined frequency band to said noise signal corresponding to the predetermined frequency band by multiplying an output from the envelope extracting portion by an output from the second band filtering portion, and configures a Noise-Vocoded Speech Sound signal therefrom; wherein

the game device outputs the Noise-Vocoded Speech Sound signal, and when the game device receives a response from a game player the game device determines whether the response is correct and outputs an indication as to whether the response is correct or incorrect is outputted.

12. (Currently Amended)   A game device outputting a Noise-Vocoded[[.]] Speech Sound signal, ~~that is obtained by dividing at least one portion of a sound signal into a plurality of frequency band signals and subjecting the frequency band signals to noise, receiving a response from a game player and outputting a result as to whether the response is correct or incorrect~~ comprising:

a first band filtering portion including a plurality of band filters, each said filter extracting a frequency band signal with a predetermined band when a sound signal is input to the game device;

an envelope extracting portion including a plurality of envelope extractors, each said extractor extracting an envelope of a corresponding frequency band signal;

a noise source generating a noise for deteriorating the input sound signal;

a second band filtering portion including a plurality of band filters, each said filter extracting a noise signal corresponding to a predetermined band from the noise outputted by the noise source;

a multiplying portion subjecting said frequency band signals with the predetermined frequency bands to said noise signals corresponding to the predetermined frequency bands by multiplying outputs from the envelope extracting portion by corresponding outputs from the second band filtering portion; and

an adding portion accumulating outputs from the multiplying portion, thereby configuring a Noise-Vocoded Speech Sound signal;

wherein the game device outputs the Noise-Vocoded Speech Sound signal, and when the game device receives a response from a game player the game device determines whether the response is correct and outputs an indication as to whether the response is correct or incorrect.

13. (Canceled)

14. (Previously Presented)   The game device according to claim 11 or 12, wherein at least one

of a number of the band filters for division into frequency band signals and a frequency of a

frequency band boundary can be changed at least through language.

15. (Currently Amended)   The game device according to claim 11 or 12, wherein at least one

of a number of the band filters for[[,]] division into frequency band signals and a frequency of a

frequency band boundary can be changed through automatic language recognition,

16. (Currently Amended)   A sound output device, ~~wherein~~ which generates a Noise-Vocoded

Speech Sound signal in which a component of a sound source signal is subjected to noise ~~is~~

~~generated by~~ , comprising:

     ~~extracting a signal with a predetermined frequency band from the sound source signal by~~

a first band filtering portion having a plurality of band filters extracting signals with

predetermined frequency bands from a sound signal stored in a sound source signal portion;

     ~~extracting an amplitude envelope of each frequency band signal by~~ an envelope

extracting portion having an envelope extractor extracting envelopes of the signals with the

predetermined bands extracted by the band filters;

     a noise source generating a noise for deteriorating the sound signal;

     ~~applying a noise source signal to~~ a second filtering portion having a plurality of band

filters ~~to extract a~~ extracting noise signals corresponding to the predetermined frequency bands

from the noise generated by the noise source;

     ~~multiplying an output from the first band filtering portion by an output from the second~~

~~band filtering portion in a multiplying portion~~ a multiplying portion subjecting said signals with

the predetermined frequency bands to said noise signals corresponding to the predetermined

frequency bands by multiplying outputs from the envelope extracting portion by corresponding outputs from the second band filtering portion; and

an adding portion accumulating outputs from the multiplying portion in an adding portion, and configuring a Noise-Vocoded Speech Sound signal therefrom;

wherein the noise output device permits at least one of a number of the band filters for division into frequency band signals and a frequency of a frequency band boundary [[can]] to be changed at least through language.

17. (Currently Amended)   [[The]] A sound output device according to claim 16 which generates a Noise-Vocoded Speech Sound signal in which a component of a sound source signal is subjected to noise, comprising:

a first band filtering portion having a plurality of band filters extracting signals with predetermined frequency bands from a sound signal stored in a sound source signal portion;

an envelope extracting portion having an envelope extractor extracting envelopes of the signals with the predetermined bands extracted by the band filters;

a noise source generating a noise for deteriorating the sound signal;

a second filtering portion having a plurality of band filters extracting noise signals corresponding to the predetermined frequency bands from the noise generated by the noise source;

a multiplying portion subjecting said signals with the predetermined frequency bands to said noise signals corresponding to the predetermined frequency bands by multiplying outputs from the envelope extracting portion by corresponding outputs from the second band filtering portion; and

an adding portion accumulating outputs from the multiplying portion, and configuring a Noise-Vocoded Speech Sound signal therefrom,

wherein the noise output device permits at least one of a number of the band filters for division into frequency band signals and a frequency of a frequency band boundary [[can]] to be changed through automatic language recognition.

18. (Currently Amended)   The hearing aid according to claim 1 or 2, comprising a sound signal extractor for extracting only a sound component from an input signal which includes an ambient noise,

wherein said at least one portion of an input sound signal is the band filter included in the first band filtering portion extracts the signal with the predetermined band from a signal of the sound component extracted by the sound signal extractor.

19. (Currently Amended)   The training device according to claim 6 or 7, comprising a sound signal extractor for extracting only a sound component from a signal which includes an ambient noise,

wherein said at least one portion of a sound signal is the band filter included in the first band filtering portion extracts the signal with the predetermined band from a signal of the sound component extracted by the sound signal extractor.

20. (Currently Amended)   The game device according to claim 11 or 12, comprising a sound signal extractor for extracting only a sound component from a signal which includes an ambient noise,

wherein ~~said at least one portion of a sound signal is~~ <u>the band filter included in the first</u> <u>band filtering portion extracts the signal with the predetermined band from</u> a signal of the sound component extracted by the sound signal extractor.

21. (Currently Amended)   The sound output device according to claim 16 or 17, comprising a sound signal extractor for extracting only a sound component from a sound signal <u>which includes</u> <u>an ambient noise,</u>

      wherein ~~the sound source signal from which the first band filtering portion extracts is~~ <u>the</u> <u>band filter included in the first band filtering portion extracts the signal with the predetermined</u> <u>band from</u> a signal of the sound component extracted by the sound signal extractor[[,]]<u>.</u>

22. (New)   The hearing aid according to claim 1 or 2, wherein the Noise-Vocoded Speech Sound signal is adapted to be recognized by utilizing a healthy brain part of a hearing-impaired person such that a part of recognizable sound information may be compernsated by a part of the person's brain other than the healthy part, so that the input sound signal may be understood by the hearing-impaired person.

23. (New)   The training aid according to claim 6 or 7, wherein the Noise-Vocoded Speech Sound signal is adapted to be recognized by utilizing a healthy brain part of a hearing-impaired person such that a part of recognizable sound information may be compernsated by a part of the person's brain other than the healthy part, so that the input sound signal may be understood by the hearing-impaired person.

14

24. (New)   The game device according to claim 11 or 12, wherein the Noise-Vocoded Speech Sound signal is adapted to be recognized by utilizing a healthy brain part of a hearing-impaired person such that a part of recognizable sound information may be compernsated by a part of the person's brain other than the healthy part, so that the input sound signal may be understood by the hearing-impaired person.